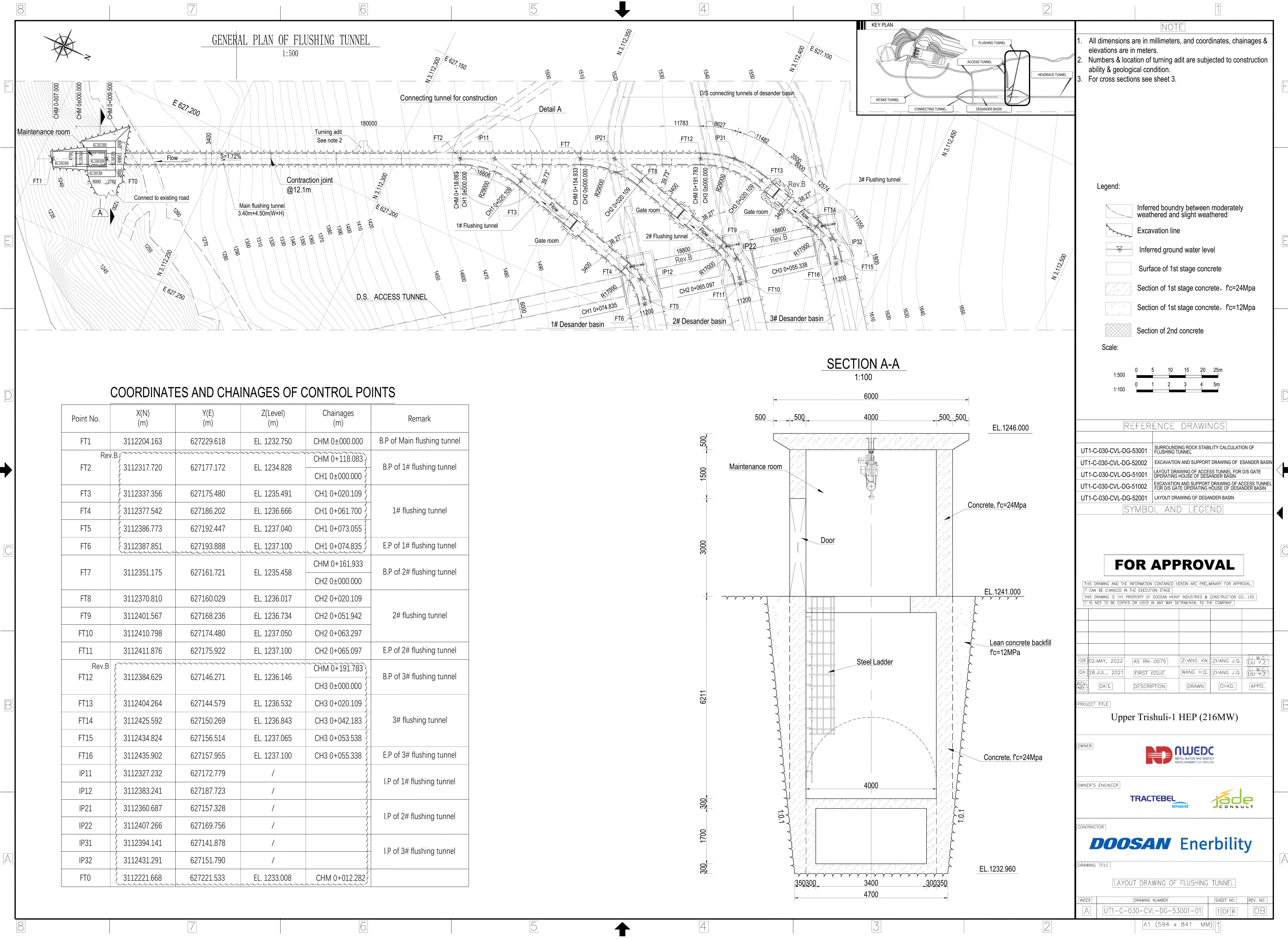
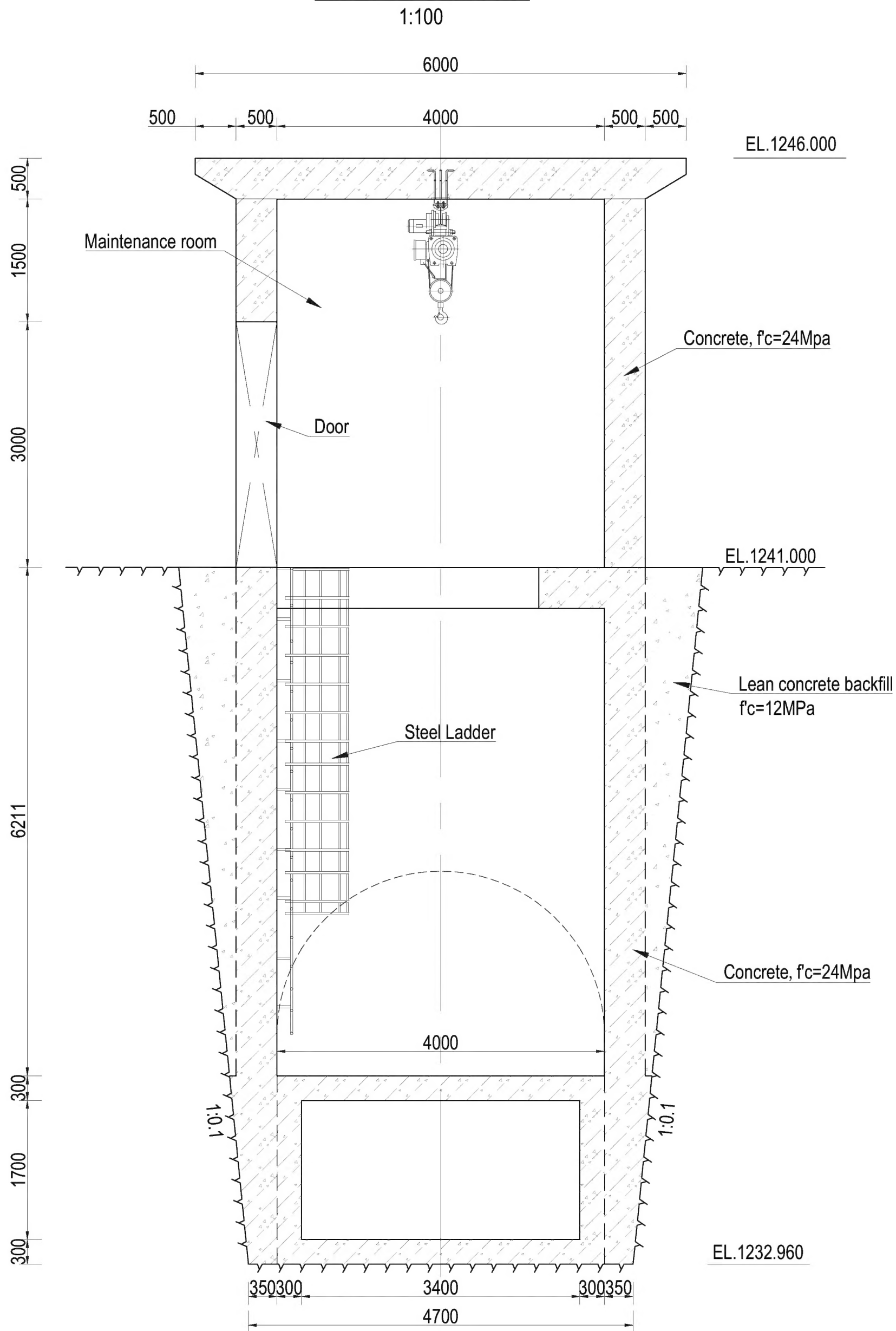




COORDINATES AND CHAINAGES OF CONTROL POINTS

Point No.	X(N) (m)	Y(E) (m)	Z(Level) (m)	Chainages (m)	Remark
FT1	3112204.163	627229.618	EL. 1232.750	CHM 0±000.000	B.P of Main flushing tunnel
FT2	3112317.720	627177.172	EL. 1234.828	CHM 0+118.083 CH1 0±000.000	B.P of 1# flushing tunnel
FT3	3112337.356	627175.480	EL. 1235.491	CH1 0+020.109	1# flushing tunnel
FT4	3112377.542	627186.202	EL. 1236.666	CH1 0+061.700	
FT5	3112386.773	627192.447	EL. 1237.040	CH1 0+073.055	
FT6	3112387.851	627193.888	EL. 1237.100	CH1 0+074.835	E.P of 1# flushing tunnel
FT7	3112351.175	627161.721	EL. 1235.458	CHM 0+161.933 CH2 0±000.000	B.P of 2# flushing tunnel
FT8	3112370.810	627160.029	EL. 1236.017	CH2 0+020.109	2# flushing tunnel
FT9	3112401.567	627168.236	EL. 1236.734	CH2 0+051.942	
FT10	3112410.798	627174.480	EL. 1237.050	CH2 0+063.297	
FT11	3112411.876	627175.922	EL. 1237.100	CH2 0+065.097	E.P of 2# flushing tunnel
FT12	3112384.629	627146.271	EL. 1236.146	CHM 0+191.783 CH3 0±000.000	B.P of 3# flushing tunnel
FT13	3112404.264	627144.579	EL. 1236.532	CH3 0+020.109	3# flushing tunnel
FT14	3112425.592	627150.269	EL. 1236.843	CH3 0+042.183	
FT15	3112434.824	627156.514	EL. 1237.065	CH3 0+053.538	
FT16	3112435.902	627157.955	EL. 1237.100	CH3 0+055.338	E.P of 3# flushing tunnel
IP11	3112327.232	627172.779	/		I.P of 1# flushing tunnel
IP12	3112383.241	627187.723	/		I.P of 2# flushing tunnel
IP21	3112360.687	627157.328	/		
IP22	3112407.266	627169.756	/		
IP31	3112394.141	627141.878	/		I.P of 3# flushing tunnel
IP32	3112431.291	627151.790	/		
FT0	3112221.668	627221.533	EL. 1233.008	CHM 0+012.282	

SECTION A-A



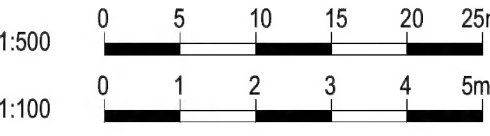
NOTE

1. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
2. Numbers & location of turning adit are subjected to construction ability & geological condition.
3. For cross sections see sheet 3.

Legend:

- Inferred boundry between moderately weathered and slight weathered
- Excavation line
- Inferred ground water level
- Surface of 1st stage concrete
- Section of 1st stage concrete, $f_c=24\text{Mpa}$
- Section of 1st stage concrete, $f_c=12\text{Mpa}$
- Section of 2nd concrete

Scale:



REFERENCE DRAWINGS

UT1-C-030-CVL-DG-53001	SURROUNDING ROCK STABILITY CALCULATION OF FLUSHING TUNNEL
UT1-C-030-CVL-DG-52002	EXCAVATION AND SUPPORT DRAWING OF DESANDER BASIN
UT1-C-030-CVL-DG-51001	LAYOUT DRAWING OF ACCESS TUNNEL FOR D/S GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-51002	EXCAVATION AND SUPPORT DRAWING OF ACCESS TUNNEL FOR D/S GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-52001	LAYOUT DRAWING OF DESANDER BASIN

SYMBOL AND LEGEND

FOR APPROVAL

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OB	02.MAY., 2022	AS RN-0075	ZHANG KAI	ZHANG J.Q.	LI W.G.
OA	28.JUL., 2021	FIRST ISSUE	WANG H.Q.	ZHANG J.Q.	LI W.G.
REV.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.

PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC
NEPAL WATER AND ENERGY DEVELOPMENT CO. (PVT.) LTD.

OWNER'S ENGINEER
TRACTEBEL
jade CONSULT

CONTRACTOR
DOOSAN Enerbility

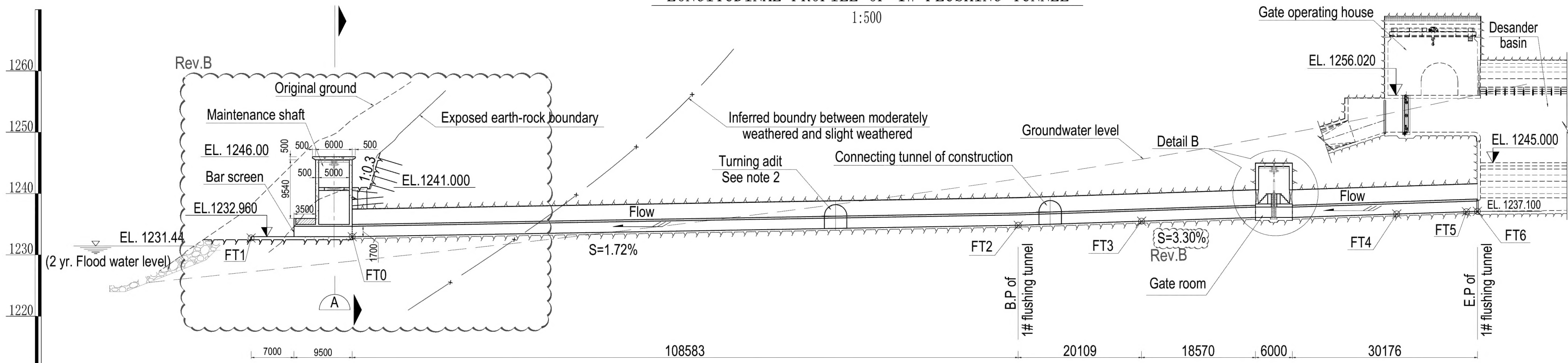
DRAWING TITLE
LAYOUT DRAWING OF FLUSHING TUNNEL

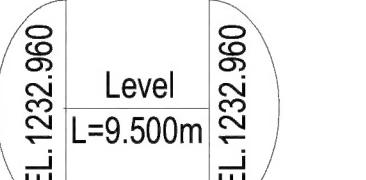
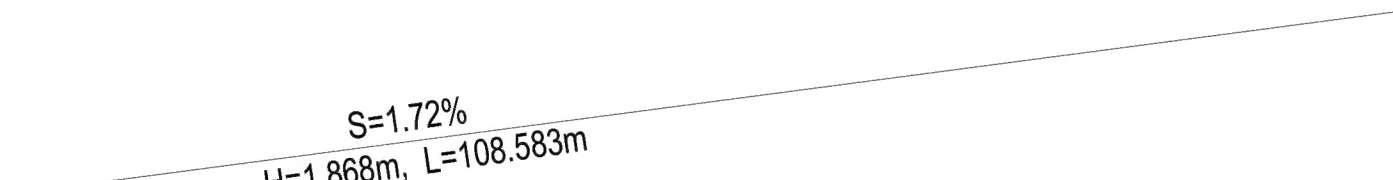
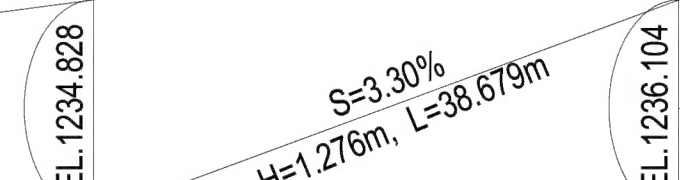
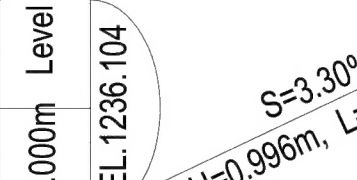
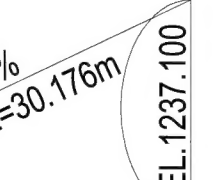
INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-53001-01	1 OF 4	OB

A1 (594 x 841 MM)

LONGITUDINAL PROFILE OF 1# FLUSHING TUNNEL

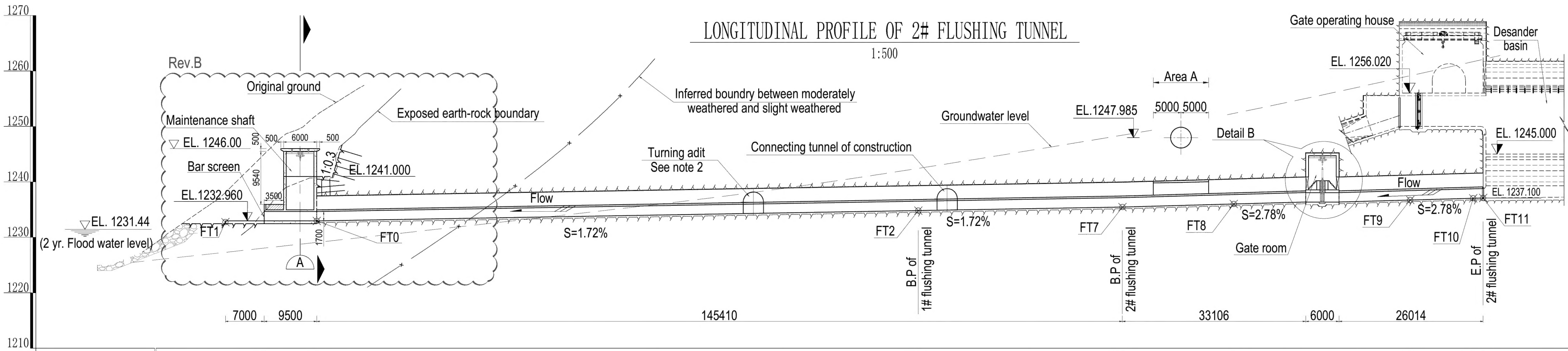
1:500



Chainage (m)	CHM 0+000.000										CHM 0+009.500										CHM 0+118.083										CHM 0+020.109										CHM 0+038.679										CHM 0+044.679										CHM 0+065.034										CHM 0+073.055										CHM 0+074.855									
Vertical alignment																																																																																										
Distance (m)	B.P. 00 0.000										10 20 30 40 50 60 70 80 90 100 110 118.083										130 138.189										156.762 162.762										170 180 190 192.938																																																	
Assumed rock classification	IV										III										II																																																																					

LONGITUDINAL PROFILE OF 2# FLUSHING TUNNEL

1:500



Chainage (m)	CHM 0+000.000										CHM 0+009.500										CHM 0+118.083 CH1 0+000.000										CHM 0+154.933 CH2 0+000.000										CH2 0+020.109										CH2 0+051.942										CH2 0+063.297										CH2 0+065.097									
Vertical alignment											S=1.72% H=2.498m, L=145.410m										EL. 1234.828										EL. 1235.458 EL. 1235.458										H=0.92m, L=33.106m S=2.78%										EL. 1236.378 Level L=6.000m EL. 1236.378										S=2.78% H=0.722m, L=26.014m										EL. 1237.734 EL. 1237.100									
Distance (m)	B.P. 00 0.000										10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 154.910										175.016										188.016 194.016										220 220.030																																							
Assumed rock classification	IV										III										II																																																											

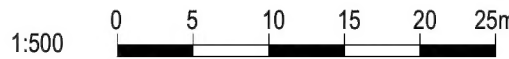
NOTE

- All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
- Numbers & location of turning adit are subjected to construction ability & geological condition.
- For Detail A see sheet 4.

Legend:

- Inferred boundry between moderately weathered and slight weathered
- Excavation line
- Inferred ground water level
- surface of 1st stage concrete
- section of 1st stage concrete, $f_c=24\text{Mpa}$
- section of 1st stage concrete, $f_c=16\text{Mpa}$
- Section of 2nd concrete

Scale:



REFERENCE DRAWINGS

UT1-C-030-CVL-DG-53001	SURROUNDING ROCK STABILITY CALCULATION OF FLUSHING TUNNEL
UT1-C-030-CVL-DG-52002	EXCAVATION AND SUPPORT DRAWING OF ESANDER BASIN
UT1-C-030-CVL-DG-51001	LAYOUT DRAWING OF ACCESS TUNNEL FOR DIS GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-51002	EXCAVATION AND SUPPORT DRAWING OF ACCESS TUNNEL FOR DIS GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-52001	LAYOUT DRAWING OF DESANDER BASIN

SYMBOL AND LEGEND

FOR APPROVAL

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REV. NO.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
01	02.MAY, 2022	AS RN-0075	ZHANG KAI	ZHANG J.Q.	LI W.G.
02	28.JUL., 2021	FIRST ISSUE	WANG H.Q.	ZHANG J.Q.	LI W.G.

PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC
NATURAL WATER AND ENERGY DEVELOPMENT CO. (PVT) LTD.

OWNER'S ENGINEER
TRACTEBEL
jade CONSULT

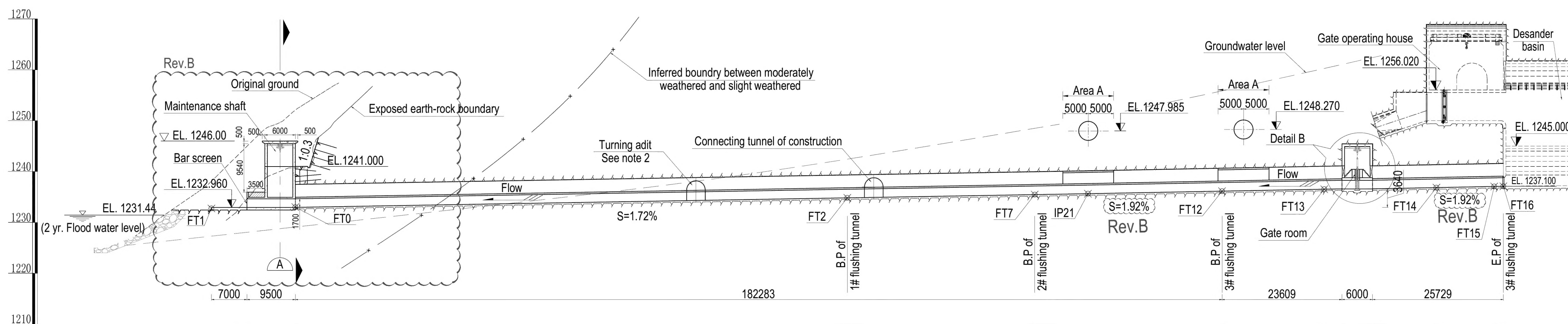
CONTRACTOR
DOOSAN Enerbility

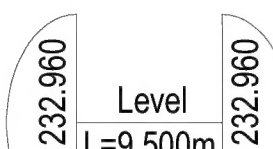
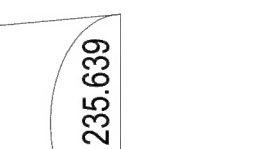
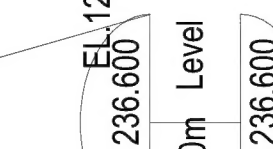
DRAWING TITLE
LAYOUT DRAWING OF FLUSHING TUNNEL

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-53001-02	2 OF 4	01

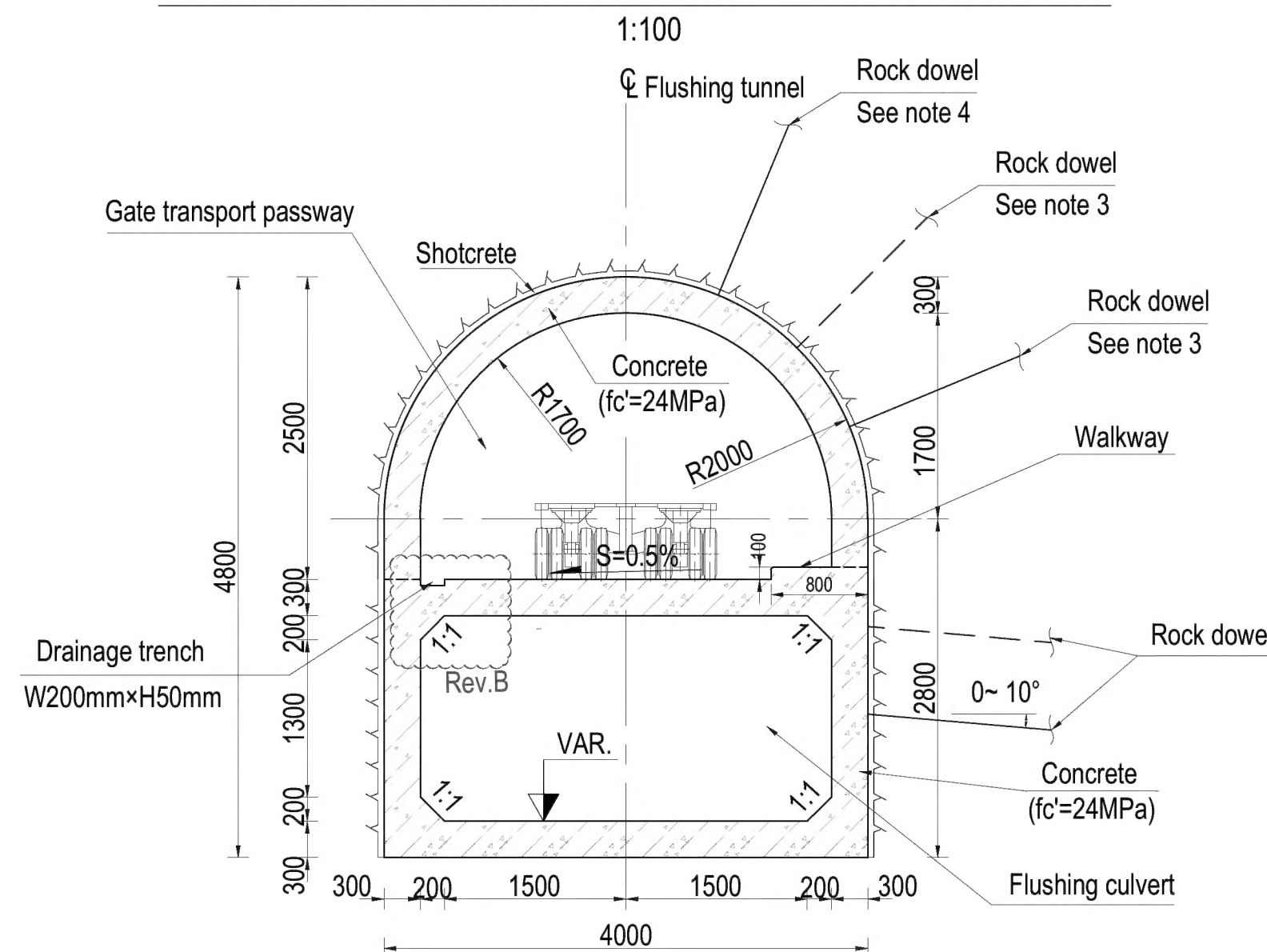
LONGITUDINAL PROFILE OF 3# FLUSHING TUNNEL

1:500

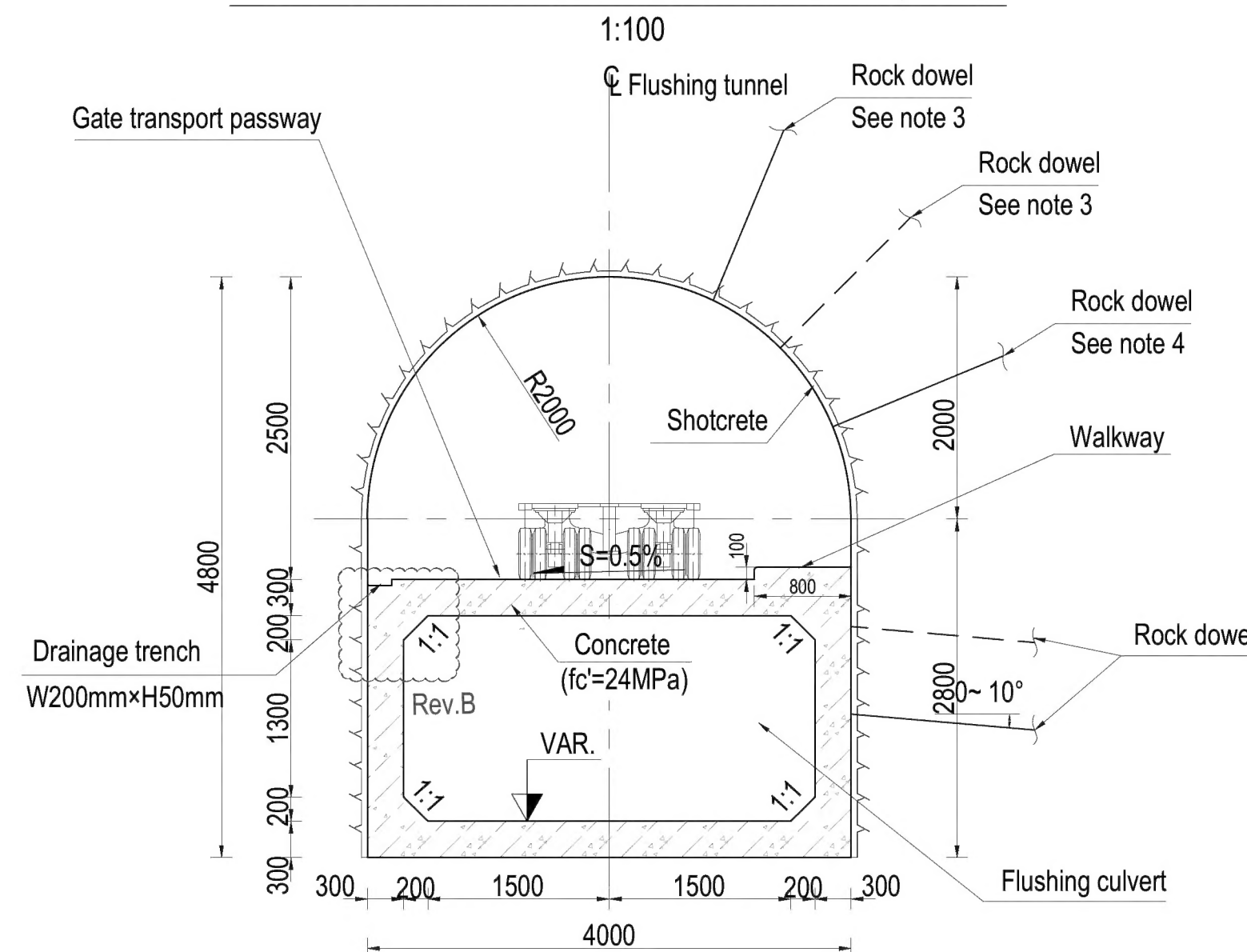


Chainage (m)	CHM 0+000.000 CHM 0+009.500										CHM 0+118.083 CH1 0+000.000										CHM 0+154.933 CH2 0+000.000										CPH 0+191.783 CH3 0+000.000										CH3 0+020.109 CH3 0+023.608 CH3 0+029.608										CH3 0+042.183 CH3 0+053.538 CH3 0+055.338									
Vertical alignment											S=1.72% H=2.679m, L=155.911m																				S=1.92% H=0.961m, L=49.981m																													
Distance (m)	B.P 00 0.000 10 20 30 40 50 60 70 80 90 100 110 118.230										120 130 140 150 155.068 160 170										180 190 191.930 200 210 212.039 E.P 215.539 220 221.539 230 234.113 240 245.468 247.268 250																																							
Assumed rock classification	IV										III										II																																							

TYPICAL SECTION FOR ROCK IV AND AREA A



TYPICAL SECTION FOR ROCK III, II & I



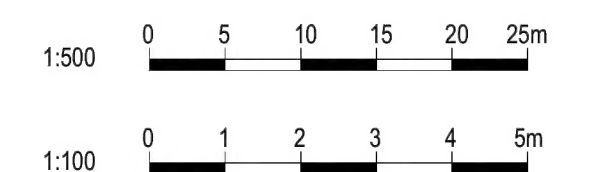
NOTE

- All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
- Numbers & location of turning adit are subjected to construction ability & geological condition.
- Layout and spacing of rockdowls and shotcretes are shown in EXCAVATION AND SUPPORT OF FLUSHING TUNNEL (dwg. No.: UT1-C-030-CVL-DG-53002).
- For Detail A see sheet 4.

Legend:

- Inferred boundry between moderately weathered and slight weathered
- Excavation line
- Inferred ground water level
- surface of 1st stage concrete
- section of 1st stage concrete, $f_c=24\text{MPa}$
- section of 1st stage concrete, $f_c=16\text{MPa}$
- Section of 2nd concrete

Scale:



REFERENCE DRAWINGS

UT1-C-030-CVL-DG-53001	SURROUNDING ROCK STABILITY CALCULATION OF FLUSHING TUNNEL
UT1-C-030-CVL-DG-52002	EXCAVATION AND SUPPORT DRAWING OF ESANDER BASIN
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UT1-C-030-CVL-DG-51002	EXCAVATION AND SUPPORT DRAWING OF ACCESS TUNNEL FOR DIS GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-52001	LAYOUT DRAWING OF DESANDER BASIN

SYMBOL AND LEGEND

FOR APPROVAL

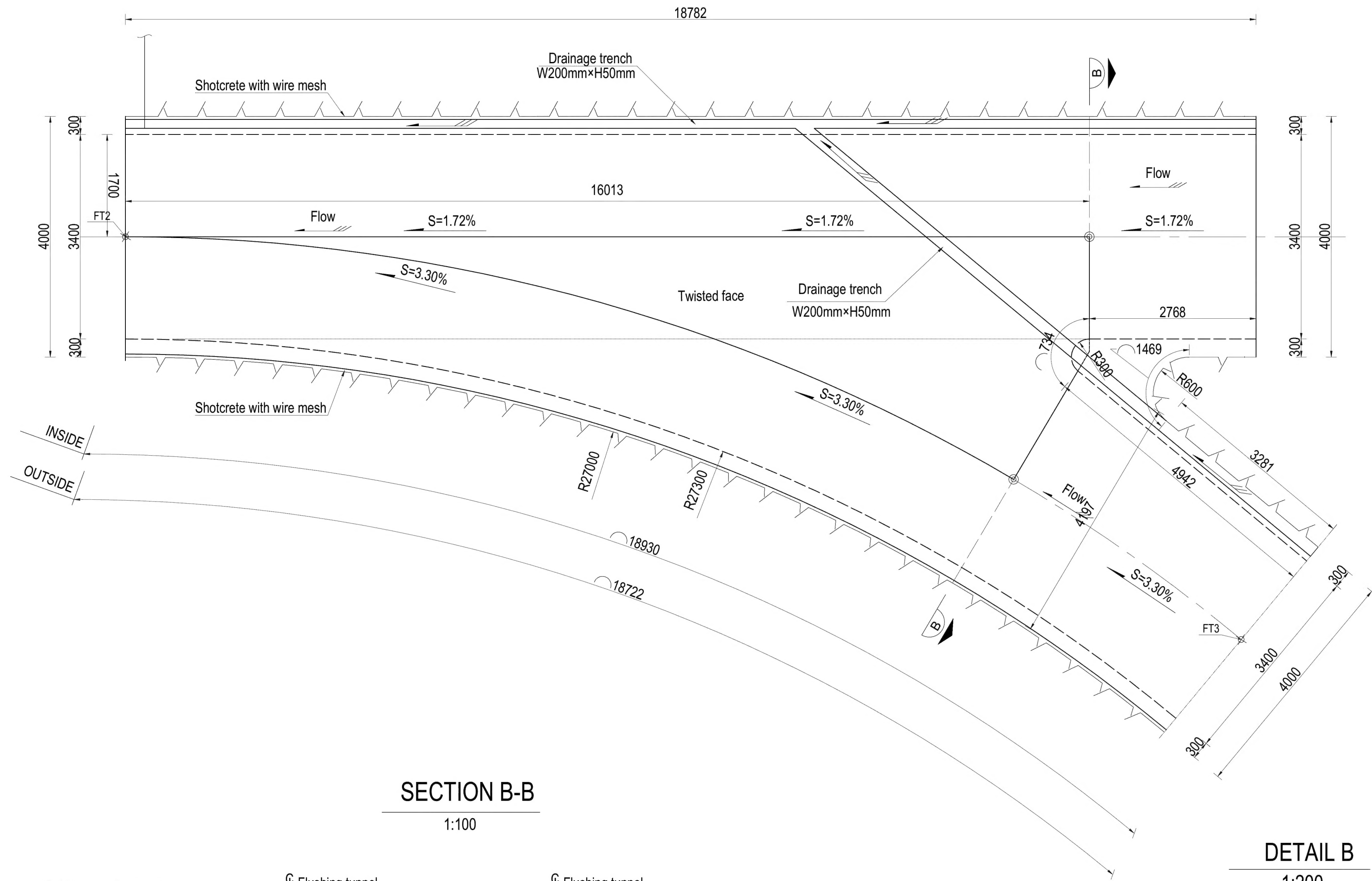
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REV.	NO.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
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OA	28.JUL., 2021	FIRST ISSUE	WANG H.Q.	ZHANG J.Q.	LIU W.G.	LIU Y.Z.

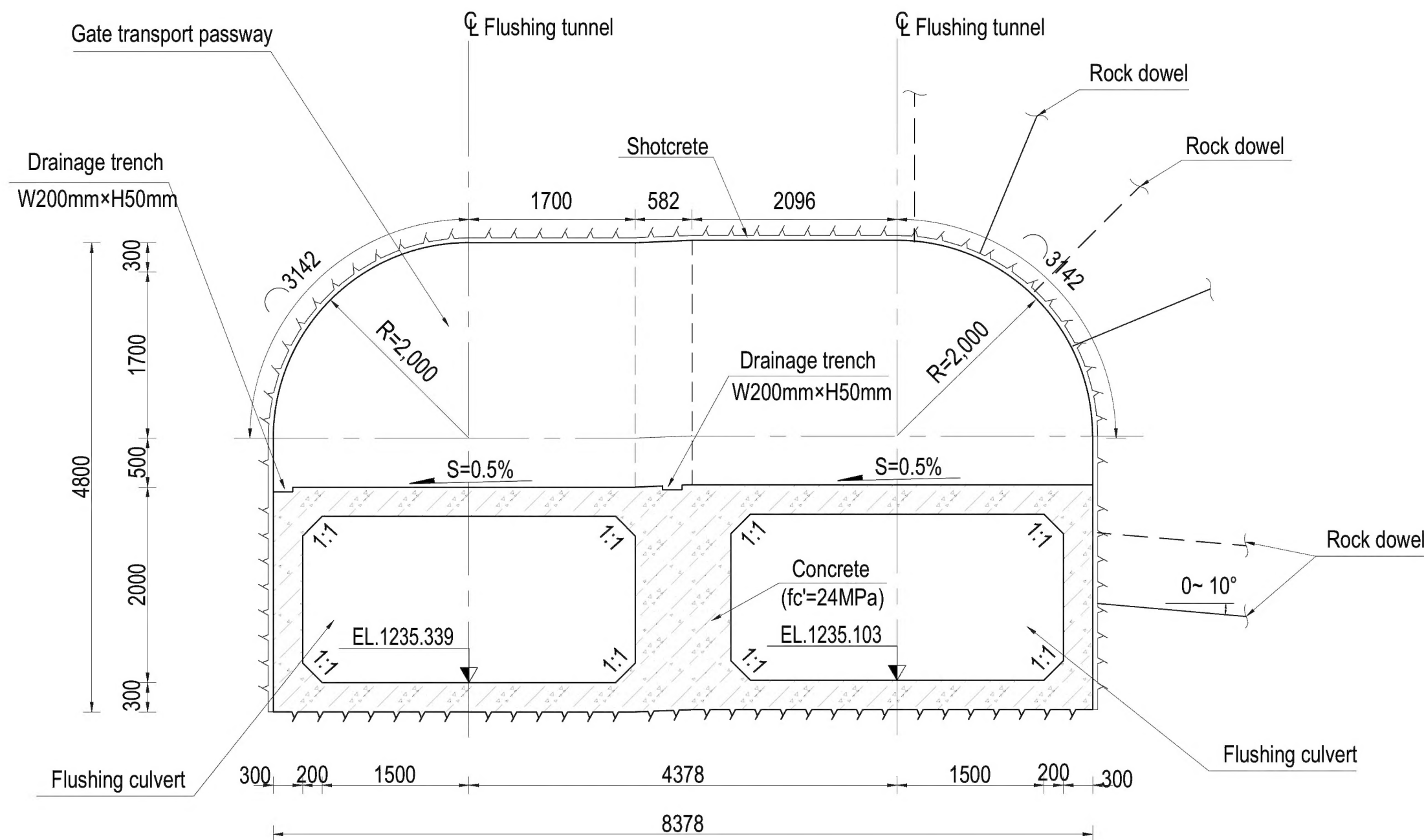
PROJECT TITLE		Upper Trishuli-1 HEP (216MW)	
OWNER		NWEDC NORTEL WATER AND ENERGY DEVELOPMENT CO. (PVT) LTD.	
OWNER'S ENGINEER		TRACTEBEL ENGIN jade CONSULT	
CONTRACTOR		DOOSAN Enerbility	
DRAWING TITLE		LAYOUT DRAWING OF FLUSHING TUNNEL	
INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-53001-03	3 OF 4	OB

A1 (594 x 841 MM) 1

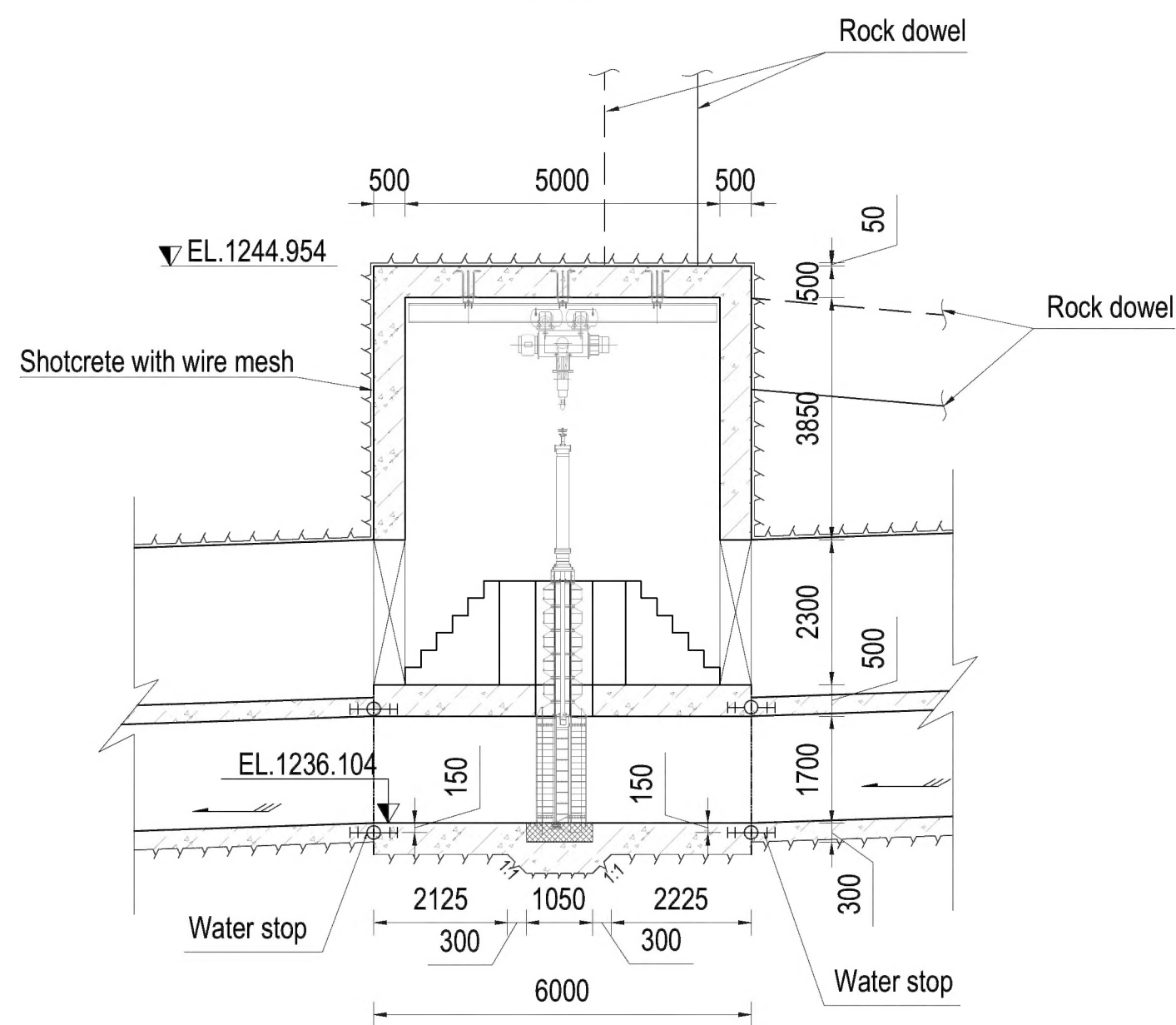
DETAIL A
1:100



SECTION B-B
1:100



DETAIL B
1:200



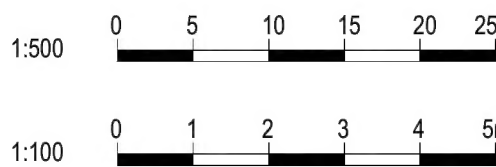
NOTE

1. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
2. Numbers & location of turning adit are subjected to construction ability & geological condition.
3. Layout and spacing of rockdowls are shown in EXCAVATION AND SUPPORT OF FLUSHING TUNNEL (dwg. No.: UT1-C-030-CVL-DG-53002).

Legend:

- Inferred boundry between moderately weathered and slight weathered
- Excavation line
- Inferred ground water level
- surface of 1st stage concrete
- section of 1st stage concrete, $f_c=24\text{MPa}$
- section of 1st stage concrete, $f_c=16\text{MPa}$
- Section of 2nd concrete

Scale:



REFERENCE DRAWINGS

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UT1-C-030-CVL-DG-51001	LAYOUT DRAWING OF ACCESS TUNNEL FOR DIS GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-51002	EXCAVATION AND SUPPORT DRAWING OF ACCESS TUNNEL FOR DIS GATE OPERATING HOUSE OF DESANDER BASIN
UT1-C-030-CVL-DG-52001	LAYOUT DRAWING OF DESANDER BASIN

SYMBOL AND LEGEND

FOR APPROVAL

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OA	28.JUL., 2021	FIRST ISSUE	WANG H.Q.	ZHANG J.Q.	LIU Y.Z.
REV.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.

PROJECT TITLE

Upper Trishuli-1 HEP (216MW)

OWNER



OWNER'S ENGINEER



CONTRACTOR

DOOSAN Enerbility

DRAWING TITLE

LAYOUT DRAWING OF FLUSHING TUNNEL

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-030-CVL-DG-53001-04	4 OF 4	OB

A1 (594 x 841 MM)